

HEIG-VD — BDR

Laboratoire 3 – Rapport

[redacted]

21 novembre 2023

Question 1

```
1 SELECT
2     customer_id,
3     first_name || ' ' || last_name AS nom,
4     email
5 FROM customer
6 WHERE first_name = 'PHYLLIS'
7     AND store_id = 1
8 ORDER BY customer_id DESC;
```

LISTING 1 – Requête de la question 1

	customer_id	nom	email
1	93	PHYLLIS FOSTER	PHYLLIS.FOSTER@sakilacustomer.org

TABLE 1 – Nombre total de résultats : 1.

Question 2

```
1 SELECT
2     title AS titre,
3     release_year AS annee_sortie
4 FROM film
5 WHERE rating = 'R'
6     AND length < 60
7     AND replacement_cost = 12.99
8 ORDER BY title;
```

LISTING 2 – Requête de la question 2

	titre	annee_sortie
1	CLOSER BANG	2006
2	GO PURPLE	2006

TABLE 2 – Nombre total de résultats : **2**.

Question 3

```

1  SELECT
2      ctry.country,
3      city.city,
4      adr.postal_code
5  FROM city
6      JOIN address adr
7          ON city.city_id = adr.city_id
8      JOIN country ctry
9          ON city.country_id = ctry.country_id
10 WHERE ctry.country = 'France'
11      OR (ctry.country_id >= 63 AND ctry.country_id <= 67)
12 ORDER BY ctry.country, city, adr.postal_code;

```

LISTING 3 – Requête de la question 3

	country	city	postal_code
1	France	Brest	61507
2	France	Le Mans	22853
3	France	Toulon	80720
4	France	Toulouse	34021
5	Mozambique	Beira	86768
6	Mozambique	Naala-Porto	65892
7	Mozambique	Tete	71986
8	Myanmar	Monywa	68146
9	Myanmar	Myingyan	53561
10	Nauru	Yangor	65952
11	Nepal	Birgunj	97960
12	Netherlands	Amersfoort	33711
13	Netherlands	Apeldoorn	11044
14	Netherlands	Ede	504
15	Netherlands	Emmen	42123
16	Netherlands	s-Hertogenbosch	43310

TABLE 3 – Nombre total de résultats : **16**.

Question 4

```
1 SELECT
2     customer_id,
3     first_name AS prenom,
4     last_name AS nom
5 FROM customer
6     JOIN address adr
7         ON adr.address_id = customer.address_id
8 WHERE active = TRUE
9     AND adr.city_id = 171
10    AND store_id = 1
11 ORDER BY first_name;
```

LISTING 4 – Requête de la question 4

	customer_id	prenom	nom
1	51	ALICE	STEWART

TABLE 4 – Nombre total de résultats : 1.

Question 5

```

1  SELECT
2    c1.first_name AS prenom_1,
3    c1.last_name AS nom_1,
4    c2.first_name AS prenom_2,
5    c2.last_name AS nom_2
6  FROM customer c1
7    CROSS JOIN customer c2
8    JOIN rental r1
9      ON c1.customer_id = r1.customer_id
10   JOIN rental r2
11     ON c2.customer_id = r2.customer_id
12   JOIN inventory i1
13     ON i1.inventory_id = r1.inventory_id
14   JOIN inventory i2
15     ON i2.inventory_id = r2.inventory_id
16 WHERE i1.film_id = i2.film_id
17    AND c1.customer_id < c2.customer_id
18 GROUP BY c1.first_name, c1.last_name,
19           c2.first_name, c2.last_name;

```

LISTING 5 – Requête de la question 5

	prenom_1	nom_1	prenom_2	nom_2
1	JAVIER	ELROD	HUGH	WALDROP
2	TAMARA	NGUYEN	BRADLEY	MOTLEY
3	BONNIE	HUGHES	ANGEL	BARCLAY
4	KIM	CRUZ	ALEX	GRESHAM
5	ANGELA	HERNANDEZ	MILDRED	BAILEY
6	CONSTANCE	REID	BILLY	POULIN
7	GREGORY	MAULDIN	BARRY	LOVELACE
8	JOANNE	ROBERTSON	RICHARD	MCCRARY
9	TIMOTHY	BUNN	KARL	SEAL
10	FRANCES	PARKER	CARMEN	OWENS
11	DANNY	ISOM	SHANE	MILLARD
12	LISA	ANDERSON	ANNETTE	OLSON
13	SHELLY	WATTS	JUSTIN	NGO
14	GLEN	TALBERT	EDUARDO	HIATT
15	LAUREN	HUDSON	JUSTIN	NGO
16	MELINDA	FERNANDEZ	SONIA	GREGORY
17	WENDY	HARRISON	TED	BREAUX
18	BRANDON	HUEY	STEVE	MACKENZIE
19	LINDA	WILLIAMS	ROBIN	HAYES
20	RUTH	MARTINEZ	KURT	EMMONS

TABLE 5 – Nombre total de résultats : **98692**.

Question 6

```
1  SELECT
2    last_name AS nom,
3    first_name AS prenom
4  FROM actor
5  WHERE actor_id IN (
6    SELECT
7      actor_id
8    FROM film_actor
9    WHERE film_id IN (
10     SELECT
11       film_id
12     FROM film_category
13     WHERE category_id = (
14       SELECT
15         category_id
16       FROM category
17       WHERE name = 'Horror'
18     )
19   )
20 )
21 AND (first_name LIKE 'K%' OR last_name LIKE 'D%')
22 GROUP BY first_name, last_name;
```

LISTING 6 – Requête de la question 6

	nom	prenom
1	DREYFUSS	ALAN
2	DUKAKIS	BURT
3	DEPP	CHRIS
4	DAY-LEWIS	FRANCES
5	DEGENERES	GINA
6	DUNST	GROUCHO
7	DAVIS	JENNIFER
8	DEGENERES	JODIE
9	DEAN	JUDY
10	DENCH	JULIANNE
11	BERRY	KARL
12	HOFFMAN	KENNETH
13	PALTROW	KENNETH
14	PESCI	KENNETH
15	TORN	KENNETH
16	GARLAND	KEVIN
17	ALLEN	KIM
18	PALTROW	KIRSTEN
19	DEE	LUCILLE
20	DEAN	RIVER

TABLE 6 – Nombre total de résultats : **25**.

Question 7

7.a)

```

1  SELECT
2      film.film_id AS id,
3      title AS titre,
4      rental_rate / rental_duration AS prix_de_location_par_jour
5  FROM film
6      LEFT JOIN inventory i
7          ON film.film_id = i.film_id
8      LEFT JOIN rental r
9          ON i.inventory_id = r.inventory_id
10 WHERE rental_rate / rental_duration <= 1.00
11      AND i.inventory_id IS NULL
12      AND r.rental_id IS NULL
13 GROUP BY film.film_id;

```

LISTING 7 – Requête de la question 7.a)

	id	titre	prix_de_location_par_jour
1	14	ALICE FANTASIA	0.165
2	33	APOLLO TEEN	0.598
3	36	ARGONAUTS TOWN	0.14142857142857142857
4	38	ARK RIDGEMONT	0.165
5	41	ARSENIC INDEPENDENCE	0.2475
6	87	BOONDOCK BALLROOM	0.14142857142857142857
7	108	BUTCH PANTHER	0.165
8	128	CATCH AMISTAD	0.14142857142857142857
9	144	CHINATOWN GLADIATOR	0.71285714285714285714
10	148	CHOCOLATE DUCK	0.99666666666666666667
11	171	COMMANDMENTS EXPRESS	0.83166666666666666667
12	198	CRYSTAL BREAKING	0.49833333333333333333
13	217	DAZED PUNK	0.83166666666666666667
14	221	DELIVERANCE MULHOLLAND	0.2475
15	318	FIREHOUSE VIETNAM	0.14142857142857142857
16	325	FLOATS GARDEN	0.49833333333333333333
17	332	FRANKENSTEIN STRANGER	0.14142857142857142857
18	359	GLADIATOR WESTWARD	0.83166666666666666667
19	404	HATE HANDICAP	0.2475
20	419	HOCUS FRIDA	0.7475

TABLE 7 – Nombre total de résultats : **36**.

7.b)

```

1 SELECT
2     film_id AS id,
3     title AS titre,
4     rental_rate / rental_duration AS prix_de_location_par_jour
5 FROM film
6 WHERE rental_rate / rental_duration <= 1.00
7     AND film_id NOT IN (
8         SELECT
9             film_id
10        FROM inventory i
11        JOIN rental r
12            ON i.inventory_id = r.inventory_id
13    )
14 GROUP BY film.film_id;

```

LISTING 8 – Requête de la question 7.b)

	id	titre	prix_de_location_par_jour
1	14	ALICE FANTASIA	0.165
2	33	APOLLO TEEN	0.598
3	36	ARGONAUTS TOWN	0.14142857142857142857
4	38	ARK RIDGEMONT	0.165
5	41	ARSENIC INDEPENDENCE	0.2475
6	87	BOONDOCK BALLROOM	0.14142857142857142857
7	108	BUTCH PANTHER	0.165
8	128	CATCH AMISTAD	0.14142857142857142857
9	144	CHINATOWN GLADIATOR	0.71285714285714285714
10	148	CHOCOLATE DUCK	0.99666666666666666667
11	171	COMMANDMENTS EXPRESS	0.83166666666666666667
12	198	CRYSTAL BREAKING	0.49833333333333333333
13	217	DAZED PUNK	0.83166666666666666667
14	221	DELIVERANCE MULHOLLAND	0.2475
15	318	FIREHOUSE VIETNAM	0.14142857142857142857
16	325	FLOATS GARDEN	0.49833333333333333333
17	332	FRANKENSTEIN STRANGER	0.14142857142857142857
18	359	GLADIATOR WESTWARD	0.83166666666666666667
19	404	HATE HANDICAP	0.2475
20	419	HOCUS FRIDA	0.7475

TABLE 8 – Nombre total de résultats : **36**.

Question 8

8.a)

```
1 SELECT
2     c.customer_id AS id,
3     c.last_name AS nom,
4     c.first_name AS prenom
5 FROM customer c
6     JOIN address adr
7         ON c.address_id = adr.address_id
8     JOIN city
9         ON adr.city_id = city.city_id
10    JOIN country ctry
11        ON city.country_id = ctry.country_id
12 WHERE ctry.country = 'Spain'
13    AND EXISTS (
14        SELECT *
15        FROM rental r
16        WHERE r.customer_id = c.customer_id
17              AND r.return_date IS NULL
18    )
19 ORDER BY c.last_name;
```

LISTING 9 – Requête de la question 8.a)

	id	nom	prenom
1	394	BROTHERS	CHRIS
2	52	SANCHEZ	JULIE

TABLE 9 – Nombre total de résultats : **2**.

8.b)

```

1 SELECT
2     c.customer_id AS id,
3     c.last_name AS nom,
4     c.first_name AS prenom
5 FROM customer c
6 JOIN address adr
7     ON c.address_id = adr.address_id
8 JOIN city
9     ON adr.city_id = city.city_id
10 JOIN country ctry
11     ON city.country_id = ctry.country_id
12 WHERE ctry.country = 'Spain'
13 AND c.customer_id IN (
14     SELECT
15         r.customer_id
16     FROM rental r
17     WHERE r.return_date IS NULL
18 )
19 ORDER BY c.last_name;

```

LISTING 10 – Requête de la question 8.b)

	id	nom	prenom
1	394	BROTHERS	CHRIS
2	52	SANCHEZ	JULIE

TABLE 10 – Nombre total de résultats : **2**.

8.c)

```
1 SELECT
2     c.customer_id AS id,
3     c.last_name AS nom,
4     c.first_name AS prenom
5 FROM customer c
6 JOIN address adr
7     ON c.address_id = adr.address_id
8 JOIN city
9     ON adr.city_id = city.city_id
10 JOIN country ctry
11     ON city.country_id = ctry.country_id
12 JOIN rental r
13     ON c.customer_id = r.customer_id
14 WHERE ctry.country = 'Spain'
15     AND r.return_date IS NULL
16 ORDER BY c.last_name;
```

LISTING 11 – Requête de la question 8.c)

	id	nom	prenom
1	394	BROTHERS	CHRIS
2	52	SANCHEZ	JULIE

TABLE 11 – Nombre total de résultats : **2**.

Question 9

```
1 SELECT
2     c.customer_id,
3     c.first_name AS prenom,
4     c.last_name AS nom
5 FROM customer c
6     JOIN rental r
7         ON c.customer_id = r.customer_id
8     JOIN inventory i
9         ON r.inventory_id = i.inventory_id
10    JOIN film_actor fa
11        ON i.film_id = fa.film_id
12    JOIN actor a
13        ON fa.actor_id = a.actor_id
14 WHERE a.first_name = 'EMILY'
15        AND a.last_name = 'DEE'
16 GROUP BY c.customer_id, c.first_name, c.last_name, a.actor_id
17 HAVING COUNT(DISTINCT i.film_id) = (
18     SELECT
19         COUNT(film_id)
20     FROM film_actor
21     WHERE actor_id = a.actor_id
22 );
```

LISTING 12 – Requête de la question 9

	customer_id	prenom	nom
1	562	WALLACE	SLONE

TABLE 12 – Nombre total de résultats : 1.

Question 10

```

1  SELECT
2      f.title AS titre,
3      COUNT(fa.actor_id) AS nb_acteurs
4  FROM film f
5      JOIN film_actor fa
6          ON f.film_id = fa.film_id
7      JOIN film_category fc
8          ON f.film_id = fc.film_id
9      JOIN category c
10         ON fc.category_id = c.category_id
11 WHERE c.name = 'Drama'
12 GROUP BY f.title
13 HAVING COUNT(fa.actor_id) < 5
14 ORDER BY nb_acteurs DESC;

```

LISTING 13 – Requête de la question 10

	titre	nb_acteurs
1	BRIGHT ENCOUNTERS	4
2	DECEIVER BETRAYED	4
3	ORIENT CLOSER	4
4	GOLDFINGER SENSIBILITY	4
5	CONFESSIONS MAGUIRE	4
6	WITCHES PANIC	4
7	ENCOUNTERS CURTAIN	4
8	DIARY PANIC	4
9	LEBOWSKI SOLDIERS	3
10	EDGE KISSING	3
11	SOMETHING DUCK	3
12	TRANSLATION SUMMER	3
13	ROCKY WAR	3
14	DESTINATION JERK	3
15	PAYCHECK WAIT	3
16	SHOOTIST SUPERFLY	3
17	DARKNESS WAR	2
18	HUNCHBACK IMPOSSIBLE	2
19	NOTTING SPEAKEASY	2
20	VIETNAM SMOOCHY	2

TABLE 13 – Nombre total de résultats : **20**.

Question 11

```
1 SELECT
2     c.category_id AS id,
3     c.name AS nom,
4     COUNT(fc.film_id) AS nb_films
5 FROM category c
6     JOIN film_category fc
7     ON c.category_id = fc.category_id
8 GROUP BY c.category_id
9 HAVING COUNT(fc.film_id) > 65
10 ORDER BY nb_films;
```

LISTING 14 – Requête de la question 11

	id	nom	nb_films
1	2	Animation	66
2	6	Documentary	68
3	8	Family	69
4	9	Foreign	73
5	15	Sports	74

TABLE 14 – Nombre total de résultats : **5**.

Question 12

```
1 SELECT
2     f.film_id AS id,
3     f.title AS titre,
4     f.length AS duree
5 FROM film f
6 WHERE f.length = (
7     SELECT
8         MIN(length)
9     FROM film
10 );
```

LISTING 15 – Requête de la question 12

	id	titre	duree
1	15	ALIEN CENTER	46
2	469	IRON MOON	46
3	504	KWAI HOMEWARD	46
4	505	LABYRINTH LEAGUE	46
5	730	RIDGEMONT SUBMARINE	46

TABLE 15 – Nombre total de résultats : **5**.

Question 13

13.a)

```

1  SELECT
2      f.film_id AS id,
3      f.title AS titre
4  FROM film f
5      JOIN film_actor fa
6          ON f.film_id = fa.film_id
7  WHERE fa.actor_id IN (
8      SELECT
9          actor_id
10     FROM film_actor
11     GROUP BY actor_id
12     HAVING COUNT(film_id) > 40
13 )
14 GROUP BY id, titre
15 ORDER BY titre;

```

LISTING 16 – Requête de la question 13.a)

	id	titre
1	20	AMELIE HELLFIGHTERS
2	34	ARABIA DOGMA
3	53	BANG KWAI
4	62	BED HIGHBALL
5	112	CALENDAR GUNFIGHT
6	123	CASABLANCA SUPER
7	124	CASPER DRAGONFLY
8	133	CHAMBER ITALIAN
9	136	CHAPLIN LICENSE
10	138	CHARIOTS CONSPIRACY
11	162	CLUELESS BUCKET
12	165	COLDBLOODED DARLING
13	172	CONEHEADS SMOOCHY
14	194	CROW GREASE
15	200	CURTAIN VIDEOTAPE
16	205	DANCES NONE
17	209	DARKNESS WAR
18	220	DEER VIRGINIAN
19	239	DOGMA FAMILY
20	268	EARLY HOME

TABLE 16 – Nombre total de résultats : **81**.

13.b)

```

1  SELECT
2      f.film_id AS id,
3      f.title AS titre
4  FROM film f
5      JOIN film_actor fa
6          ON f.film_id = fa.film_id
7      JOIN (
8          SELECT
9              actor_id
10             FROM film_actor
11             GROUP BY actor_id
12             HAVING COUNT(film_id) > 40
13         ) fa2
14         ON fa.actor_id = fa2.actor_id
15  GROUP BY id, titre;
16  ORDER BY titre;

```

LISTING 17 – Requête de la question 13.b)

	id	titre
1	20	AMELIE HELLFIGHTERS
2	34	ARABIA DOGMA
3	53	BANG KWAI
4	62	BED HIGHBALL
5	112	CALENDAR GUNFIGHT
6	123	CASABLANCA SUPER
7	124	CASPER DRAGONFLY
8	133	CHAMBER ITALIAN
9	136	CHAPLIN LICENSE
10	138	CHARIOTS CONSPIRACY
11	162	CLUELESS BUCKET
12	165	COLDBLOODED DARLING
13	172	CONEHEADS SMOOCHY
14	194	CROW GREASE
15	200	CURTAIN VIDEOTAPE
16	205	DANCES NONE
17	209	DARKNESS WAR
18	220	DEER VIRGINIAN
19	239	DOGMA FAMILY
20	268	EARLY HOME

TABLE 17 – Nombre total de résultats : **81**.

Question 14

```
1 SELECT
2     SUM(length) / 60.0 / 8 AS nb_jours
3 FROM film;
```

LISTING 18 – Requête de la question 14

	nb_jours
1	240.15

TABLE 18 – Nombre total de résultats : 1.

Question 15

```

1 SELECT
2   c.customer_id AS id,
3   c.last_name AS nom,
4   c.email AS email,
5   ctry.country AS pays,
6   COUNT(r.rental_id) AS nb_locations,
7   SUM(p.amount) AS depense_totale,
8   AVG(p.amount) AS depense_moyenne
9 FROM customer c
10  JOIN address adr
11    ON c.address_id = adr.address_id
12  JOIN city
13    ON adr.city_id = city.city_id
14  JOIN country ctry
15    ON city.country_id = ctry.country_id
16  JOIN rental r
17    ON c.customer_id = r.customer_id
18  JOIN payment p
19    ON r.rental_id = p.rental_id
20 WHERE ctry.country IN ('Switzerland', 'France', 'Germany')
21 GROUP BY c.customer_id, c.last_name, c.email, ctry.country
22 HAVING AVG(p.amount) > 3.0
23 ORDER BY ctry.country, c.last_name;

```

LISTING 19 – Requête de la question 15

	id	nom	email	pays	nb_locations	depense_totale	depense_moyenne
1	104	GRAHAM	RITA.GRAHAM@sakilacustomer.org	France	24	92.76	3.865
2	35	GREEN	VIRGINIA.GREEN@sakilacustomer.org	France	32	129.68	4.0525
3	162	HUDSON	LAUREN.HUDSON@sakilacustomer.org	France	20	71.8	3.59
4	402	YANEZ	LUIS.YANEZ@sakilacustomer.org	France	20	79.8	3.99
5	196	AUSTIN	ALMA.AUSTIN@sakilacustomer.org	Germany	35	151.65	4.3328571428571429
6	448	BETANCOURT	MIGUEL.BETANCOURT@sakilacustomer.org	Germany	29	135.71	4.6796551724137931
7	251	BREWER	VICKIE.BREWER@sakilacustomer.org	Germany	31	120.69	3.8932258064516129
8	227	BURTON	COLLEEN.BURTON@sakilacustomer.org	Germany	24	87.76	3.6566666666666667
9	114	ELLIS	GRACE.ELLIS@sakilacustomer.org	Germany	33	139.67	4.2324242424242424
10	201	FIELDS	VICKI.FIELDS@sakilacustomer.org	Germany	25	108.75	4.35
11	195	SIMS	VANESSA.SIMS@sakilacustomer.org	Germany	19	86.81	4.5689473684210526
12	598	DELVALLE	WADE.DELVALLE@sakilacustomer.org	Switzerland	22	83.78	3.8081818181818182
13	155	KNIGHT	GAIL.KNIGHT@sakilacustomer.org	Switzerland	25	109.75	4.39
14	61	RIVERA	KATHERINE.RIVERA@sakilacustomer.org	Switzerland	14	58.86	4.2042857142857143

TABLE 19 – Nombre total de résultats : 14.

Question 16**16.a)**

```
1 SELECT
2     COUNT(*) AS nb_paiements
3 FROM payment
4 WHERE amount <= 9;
```

LISTING 20 – Requête de la question 16.a)

	nb_paiements
1	15678

TABLE 20 – Nombre total de résultats : **1**.

16.c)

```
1 SELECT
2   COUNT(*) AS nb_paiements
3 FROM payment
4 WHERE amount <= 9;
```

LISTING 21 – Requête de la question 16.c)

	nb_paiements
1	0

TABLE 21 – Nombre total de résultats : **1**.

Question 17

```
1 UPDATE payment
2 SET amount      = CASE WHEN amount > 4 THEN amount * 1.5 ELSE amount END,
3   payment_date = CURRENT_DATE;
```

LISTING 22 – Requête de la question 17

```
bdr.pagila> UPDATE payment
              SET amount      = CASE WHEN amount > 4 THEN amount * 1.5 ELSE amount END,
                payment_date = CURRENT_DATE
[2023-11-21 17:12:58] 16,049 rows affected in 203 ms
```

LISTING 23 – Résultat de la question 17

Question 18

18.a)

```
1 BEGIN;
2
3 INSERT INTO city (city, country_id)
4 VALUES ('Nyon', (
5     SELECT
6         country_id
7     FROM country
8     WHERE country = 'Switzerland'
9 ));
10
11 INSERT INTO address (address, address2, district, city_id, postal_code, phone)
12 VALUES ('Rue du centre', NULL, 'Vaud', (
13     SELECT
14         MAX(city_id)
15     FROM city
16 ), '1260', '021/360.00.00');
17
18 INSERT INTO customer (store_id, first_name, last_name, email, address_id, active)
19 VALUES (1, 'Guillaume', 'Ransome', 'r@bluewin.ch', (
20     SELECT
21         MAX(address_id)
22     FROM address
23 ), TRUE);
24
25 COMMIT;
```

LISTING 24 – Requête de la question 18.a

18.b)

Il est techniquement possible de le récupérer en effectuant un **SELECT** sur la séquence qui est utilisée par le trigger lors de l'insert.

Toutefois, cette pratique n'est pas recommandée, on estime que c'est le rôle du SGBD d'octroyer l'ID de manière unique et sécurisée dans le cas d'insertions en simultané.

18.c)

Nous devons effectuer un **SELECT MAX([id]) FROM [table]**; . Comme nous sommes dans une transaction, cette requête rendra l'ID nouvellement généré, car la valeur est uniquement incrémentable.

18.d)

```
1 SELECT
2     c.customer_id,
3     c.first_name,
4     c.last_name,
5     c.email,
6     adr.address,
7     adr.address2,
8     adr.district,
9     adr.postal_code,
10    adr.phone,
11    city.city,
12    ctry.country,
13    c.store_id
14 FROM customer c
15     JOIN address adr
16         ON c.address_id = adr.address_id
17     JOIN city
18         ON adr.city_id = city.city_id
19     JOIN country ctry
20         ON city.country_id = ctry.country_id
21 WHERE c.first_name = 'Guillaume'
22        AND c.last_name = 'Ransome';
```

LISTING 25 – Requête de la question 18.d

	customer_id	first_name	last_name	email	address	address2	district	postal_code	phone	city	country	store_id
1	600	Guillaume	Ransome	r@bluewin.ch	Rue du centre	null	Vaud	1260	021/360.00.00	Nyon	Switzerland	1

TABLE 22 – Nombre total de résultats : 1.